

DETAILED ACTION

1. Claims 1, 4, 9-13, 17, 19-20, 25-27, 29 are allowed.
2. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 4/3/2009 has been entered.

Drawings

3. The Drawings filed on 9/24/2003 are acceptable for examination purpose.

Information Disclosure Statement

4. The information disclosure statement filed on 9/24/2003 is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy is enclosed with previous Office Action.

35 USC § 101

5. In view of the “Decision on Appeal at page 23, and applicant amended specification at page 21-22 [see below]

Double Patenting

6. Examiner acknowledges applicant filed “terminal disclaimer” on 6/8/2009.

Interview:

7. Applicant’s Attorney Christopher J. Culberson, Reg.No. 59,136 is thanked for the telephone interview on 10 June 2009. During that telephone Christopher J. Culberson granted authorization to amend claims **1,4,9,11,13,17,19,25,29** , cancel claims **2-3,5-8,14-16,18,21-24,28,30-33**, and amendment to specification at page 21-22.

EXAMINER’S AMENDMENT

8. An examiner’s amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Amendments to the Specification

Please amend the paragraph that begins on page 21, line 10, and continues to page 22, line 7, as follows:

Exemplary computer 800 typically includes a variety of computer-readable media. Computer-readable media can be any available media that can be accessed by computer 800 and includes both volatile and nonvolatile media, removable and non-removable media. By way of example, and not limitation, computer-readable media may comprise computer storage media ~~and communication media~~. Computer storage media include volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer-readable instructions, data structures, program modules, or other data. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by computer 800. ~~Communication media typically embodies computer-readable instructions, data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal.~~ By way of example, and not limitation,

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communication media includes wired media such as a wired network or direct-wired connection and wireless media such as acoustic, RF, infrared and other wireless media. ~~Combinations of any of the above should also be included within the scope of computer readable media.~~

The application has been amended as follows

1. (Currently Amended) A computer-implemented method for synchronizing information in namespaces stored on one or computer storage media, the method comprising:
receiving an indication of a change to information in a first namespace, the indication comprising a notice that an entity was added to the first namespace;
based on the indication, determining if an entity ~~exists~~ in a second namespace exists that is related to the information;
if so, determining if the entity in the second namespace has a characteristic that conflicts with the information, the characteristic comprising a name of the entity in the second namespace; and
if a conflict exists:
 creating a temporary placeholder within with the second namespace;
 modifying the entity in the second namespace to resolve the conflict, wherein
 modifying the entity in the second namespace comprises:

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associating the entity in the second namespace with an indication that the
name of the entity in the second namespace is no longer valid; and
altering the characteristic of the entity in the second namespace to
eliminate the conflict; and

removing the temporary placeholder from the second namespace after modifying
the entity.

2. **(Cancelled)**

3. **(Cancelled)**

4. **(Currently Amended)** The method of claim 1 [[3]], wherein the conflict
comprises a name collision between the entity in the first namespace and the entity in
the second namespace.

5. **(Cancelled)**

6. **(Cancelled)**

7. **(Cancelled)**

8. **(Cancelled)**

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9. (Currently Amended) The method of claim 1 ~~[[8]], wherein the characteristic comprises a name of the entity, and~~ wherein altering the characteristic comprises modifying the name of the entity in the second namespace.

10. (Original) The method of claim 9, wherein modifying the name comprises replacing the name with a unique identifier.

11. (Currently Amended) The method of claim 9, wherein modifying the name comprises setting a flag associated with the entity in the second namespace to indicate that the name of the entity in the second namespace is transient.

12. (Previously Presented) A computer-readable storage medium having computer-executable instructions for performing the method of claim 1.

13. (Currently Amended) A computer-implemented method for synchronizing information in namespaces stored on one or more computer storage media, the method comprising:

receiving an indication of a change to information in a first namespace, the indication of the change comprising a notice of a reference to an entity in a second namespace, and wherein the reference indicates that the information in the first namespace refers to the entity;

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~~based on the indication, determining if an entity exists in a second namespace related to the information;~~

determining that the entity has a characteristic that conflicts with the information in the first namespace;

creating a temporary representation of the entity within the second namespace,
the temporary representation of the entity comprising a phantom entity in the second namespace;

receiving a second indication of a second change to information in the first namespace and, in response to the second indication, modifying a state of the phantom entity; and

removing the ~~temporary representation of the phantom~~ entity from the second namespace upon resolving the conflict between the characteristic of the entity and the information in the first namespace.

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

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17. (Currently Amended) The method of claim 13 ~~[[16]]~~, wherein the phantom entity includes a flag indicating ~~[[the]]~~ a state of the phantom entity.

18. (Cancelled)

19. (Currently Amended) The method of claim 13 ~~[[18]]~~, wherein the second indication comprises an instruction to create the entity in the second namespace.

20. (Currently Amended) A computer-readable storage medium having computer-executable instructions for performing the method of claim 13.

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Currently Amended) A computer-readable storage medium having computer-executable components, comprising:

a synchronization environment comprising ~~having~~ an associated external namespace, an associated central namespace, and a synchronization mechanism, the synchronization mechanism being configured to receive, in a first order that differs from

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a second order, change information from the external namespace that identifies a plurality of changes to at least one object in the external namespace ~~the synchronization mechanism being configured to receive the change information in a first order that differs from a second order~~, the second order being a [[the]] temporal order in which the plurality of changes occurred to the at least one object in the external namespace, the synchronization mechanism further comprising:

a name resolving component being configured to avoid name collisions and comprising a first subspace for transient objects and a second subspace for non-transient objects, one or more of the non-transient objects comprising objects that have not been identified as having a name that is no longer valid; and

a temporary placeholder component within the central namespace, ~~the name resolving component being operative to avoid name collisions and~~ the temporary placeholder component comprising an identifier on a phantom entity in the central namespace, the phantom entity indicating that an object that is referred to by another object in the central namespace has not yet been formally created, the temporary placeholder component being operative to:

avoid a conflict created by a dangling reference, the dangling reference comprising an error corresponding to one object in the central namespace referring to another object in the central namespace that does not exist; and[[,]]

~~.when the conflict is resolved, the temporary placeholder component is configured to be removed from the central namespace~~ when the conflict is resolved

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26. (Previously Presented) The computer-readable storage medium of claim 25, wherein the central namespace includes a plurality of objects that are correlated to a corresponding plurality of objects in the external namespace.

27. (Previously Presented) The computer-readable storage medium of claim 25, wherein the name collision comprises an error corresponding to two objects in the central namespace having similar names.

28. (Cancelled)

29. (Currently Amended) The computer-readable storage medium of claim 27 ^{[[28]]}, wherein the transient objects comprise objects that have been identified as having a name that is no longer valid.

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

Reasons for allowance

The following is an examiner's statement of reasons for allowance:

The present invention is directed to incremental non-chronological synchronization of namespaces, particularly, assigning unique names to the entities within a namespace and entities that actually exist within the namespace. Synchronizing two such namespaces involves providing a mechanism for indicating that an entity has been created because a reference to that entity has been made even though that entity does not yet exist. At such time as the entity is formally created, the indication is removed. Synchronizing two such namespaces also involves providing a mechanism for indicating that an entity's unique name, the namespace has been compromised through the synchronization process

The closest prior art Newcombe et al. US Pub. 2003/0195870 is directed to lookups across namespace domain using universal resource locators, more specifically parsing a first look up request for a URL tag, the first look up request for an object located in the second namespace, the lookup including a symbolic name corresponding to a target location in the second namespace, the URL tag corresponding to a URL context and the symbolic names in a federation URL is mapped locally within the local namespace to the actual network location information [see Abstract, page 1, 0003]

The closest prior art Wong et al. US Pub. 2003/0267752 based on provisional application filed on April 24, 2004 is directed to transparent file replication using namespace replication, more specifically, file replications in a decentralized storage network that are transparent to a client. In a network attached storage or NAS switch, in the data path of a client and NAS file server to a replica file server using namespace replication to track new file locations [see Abstract, page 1,0011].

It is however, noted that prior art of record Newcombe et al. US Pub. 2003/0195870, Wong et al. US Pub. 2003/0267752 either along or in combination fails to anticipate or render obvious, the recited feature of *“creating a temporary placeholder within with the second namespace; modifying the entity in the second namespace to resolve the conflict, wherein modifying the entity in the second namespace comprises: associating the entity in the second namespace with an indication that the name of the entity in the second namespace is no longer valid; and*

altering the characteristic of the entity in the second namespace to eliminate the conflict; and removing the temporary placeholder from the second namespace after modifying the entity, in Claim 1;

“creating a temporary representation of the entity within the second namespace, the temporary representation of the entity comprising a phantom entity in the second namespace;

receiving a second indication of a second change to information in the first namespace and, in response to the second indication, modifying a state of the phantom entity; and

removing the phantom entity from the second namespace upon resolving the conflict between the characteristic of the entity and the information in the first namespace”, Claim 13 and

“a temporary placeholder component within the central namespace, the temporary placeholder component comprising an identifier on a phantom entity in the central namespace, the phantom entity indicating that an object that is referred to by another object in the central namespace has not yet been formally created, the temporary placeholder component being operative to:

avoid a conflict created by a dangling reference, the dangling reference comprising an error corresponding to one object in the central namespace referring to another object in the central namespace that does not exist; and be removed from the central namespace when the conflict is resolved”, in Claim 25

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record. The dependent claims 4,9-12,17,19-20, 26-27,29 being definite, enabled by the specification, and further limiting to the independent claim, are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam, Hosain, T, can be reached on (571) 272-3978. The fax phone numbers for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

/Srirama Channavajjala/
Primary Examiner, Art Unit 2166.